

Application No.: 10/635413

Docket No.: JCLA11963

AMENDMENTS**In the Specification:**

Please amend the paragraphs [0002], [0004], [0008], [0009] and [0011], as follows.

[0002] A wheel bearing device of a vehicle, as shown in Fig. 6 as an example, includes a wheel hub 1, a double-row bearing 2, and a constant velocity universal joint 3-3b, as essential components. In the bearing device, the constant velocity universal joint 3-3b is press-fitted into an inner periphery of the wheel hub 1 in order to allow torque transmission. Fig. 5 shows an outer joint member 12 that constitutes a conventional constant velocity universal joint 3-3b assembled in the wheel bearing device In Fig. 6. Components for the wheel bearing device have the following constructions.

[0004] To prevent a creep, the inner ring 9 is press-fitted with an adequate amount of interference. The outboard side inner race 4 formed on the outer peripheral surface of the wheel hub 1 and the inboard side inner race 5 formed on the outer peripheral surface of the inner ring 9 are used as double-row inner races. The inner ring 9 is press-fitted onto the smaller diameter stepped portion 8 of the wheel hub 1, and an outer joint member 12 of the constant velocity universal joint 3-3b, inserted from the inboard side of the wheel hub 1 in the axial direction, is then fastened onto the wheel hub 1 to mate the end portion of the inner ring 9 with the shoulder portion 13 of the outer joint member 12 so as to prevent the inner ring 9 from coming of and to perform a pre-load control.

[0008] The outer joint member 12 includes a bowl-shaped mouth portion 26 accommodating the inner joint member 23, the balls 24 and the cage 25, and a stem portion 27 integrally formed with and extending from the mouth portion 26 in an axial direction with a serration 11 formed on its outer peripheral surface. To fix the constant velocity universal joint 3-3b to the wheel hub 1, the stem portion 27 is inserted into the through hole of the wheel hub 1, so that the outer peripheral surface of the stem portion 27 and the inner peripheral surface of the through hole are mated with the serrations 11 and 10 which are formed thereon, respectively, and a nut 29 is set to the thread portion 28 formed in the shaft end portion and tightened. A pre-load is controlled by applying an axial force produced by tightening the nut 29.

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[0009] As shown in Fig. 5, the outer joint member 12, which is a part of the above-mentioned constant velocity universal joint 3-3b, includes the mouth portion 26 and the stem portion 27. The mouth portion 26 has the plurality of track grooves 21 formed on its inner peripheral surface, and a shoulder portion 13 formed on the outer peripheral surface corresponding to its bottom portion. The stem portion 27 has a back face 30, which is an end face of the shoulder portion of the mouth portion 26, to be abutted to an end portion of the inner ring 9, a thread portion 28 and the serration 11 that enables torque transmission between the wheel hub 1 and the stem portion 27. The stem portion 27 is fixed to the wheel hub 1 by tightening the nut 29 on the thread portion 28, thereby mating the serration 11 with the wheel hub 1 to transmit the torque.

[0011] However, an increase in the wall thickness in the back face 30 can lead to increase in the weight of the constant velocity universal joint 3-3b, which is not preferable. Since it also locates the center of the outer joint member 12 as near as possible to the center of king pin, restriction is imposed on the design of the base portion 31 of the stem portion 27 so as to select only the shape to be continued from the serration 11 to the back face 30 through a chamfer. This design limitation will cause stress concentration both at the serration 11 and at the base portion due to the chamfer shape, to decrease the strength. One possible countermeasure against this problem is to make an outside diameter of the base portion 31 of the stem portion 27 larger. However, this countermeasure cannot be regarded as good means because it requires a drastic change in design of the vehicle wheel portions.

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In the Drawings

Please amend drawings of Figs. 5 and 6 according to the annotated sheets showing changes. The attached sheets include replacement sheets and annotated sheets showing changes.